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| 09/517,983      | 03/03/2000  | Dean Boyd            | 20113.0002U2        | 5567             |

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| EXAMINER |
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CHARLES, DEBRA F

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| ART UNIT | PAPER NUMBER |
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3628

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/517,983

Applicant(s)

BOYD ET AL.

Examiner

Debra F. Charles

Art Unit

3628

NW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. Specification has been corrected. Claims 1,2,6,14,20,21,40, 41, and 44 have been amended. Claims 45-48 have been added.

***Response to Arguments***

2. Applicant's arguments filed December 12, 2003 have been fully considered but they are not persuasive. In response to applicant's argument that the references, Takriti (U.S. PAT. 6021402 A), Takriti (U.S.PAT. 5974403 A), Burns et al. (U.S.PAT. 5189606 A), Campbell (U.S. PAT. 5918209 A), and Huang et al. (U.S. PAT. 5953707 A) are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the references solve the same pricing problem of determining the optimal price. The applicant is not specifying the exact industry to which the pricing model applies. The applicant refers in the Abstract to a good or service and all references deal with pricing for a good or service. Thus, the actual mathematical calculations as applied to the pricing model are applicable for each service or good indicated in each reference. Thus, it is feasible to combine the references because the mathematical components work together in the pricing model.

Art Unit: 3628

The Takriti (U.S.PAT. 5974403 A) reference is relevant because it discloses using probability statistics to determine the price and claims 1 and 5 also refer to probability statistics for this purpose. It would be obvious to apply this in a real-time pricing setting since real-time pricing is old and well-known in the industry.

The Takriti (U.S. PAT. 6021402 A) patent describes pricing responses to market demand which is a dynamic response and incorporates competitor activity on the market, thus, it predicts competitor price based on multiple pricing factors. Although the prices are not subject to negotiation, they do reflect changing market conditions. The prices are not static. Thus, the organization does indeed offer different prices in response to a bid based on quantity, capability and distance between service points and delivery points.

The attorney indicates that Burns et al. does not indicate a product module that provides different possible bid amounts for a good or service. The examiner disagrees. The entire invention of Burns et al. deals with creating costs for different products and services which when combined together provide a comprehensive amount upon which to base a bid. This type of calculation includes sufficient information to determine the contribution margin or expected contribution (the profit margin reflecting moneys received above the actual costs calculated). It would be obvious to generate the costs in real-time so the costs figures change dynamically and this is old and well-known in the art as seen in the stock markets each day. In the stock markets, prices change continuously throughout the day based on a variety of factors. The prices change in

real-time and the price changes in the market do affect other prices. In fact, the main feature of the stock markets is that prices change dynamically and directly affect other prices on the market as a result.

Thus, the Burns et al. and two Takriti patents do reflect competitor pricing. Burns et al. incorporates a comparative system that does reflect competitor pricing based comparative cost analysis.

Optimization calculation strategies are old and well-known in mathematical computation, thus using probability and statistics for optimization calculation would be obvious.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "the" in lines 4,5 and 7. There is insufficient antecedent basis for this limitation in the claim. Please replace the word "the" with "a" or "an" in independent claims where terms are used for the first time in that claim set.

4. Claim 1 recites the limitation "an optimum value" in line 1, and claim 2 recites the limitation "of an optimal value". The examiner recommends that the attorney use terms consistently throughout the claims to ensure the same meaning is applied by the reader.

5. Claim 1 recites the limitation "costs the values using stored cost data" in line 5.

The examiner recommends the attorney expand on this syntax to provide a fuller explanation of this aspect of the invention.

6. Claim 5 contradicts claim 1 in meaning and content and the terms "costing the value" needs to be expand to further explain the meaning.

7. Claim 6 recites the limitation "the" in lines 1-9. There is insufficient antecedent basis for this limitation in the claim. Please replace the word "the" with "a" or "an" in independent claims where terms are used for the first time in that claim set.

Further, claim 6 recites the limitation "costs the bids using stored cost data". The examiner recommends the attorney expand on this syntax to provide a fuller explanation of this aspect of the invention.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1,2,3,6,7,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24, 26,27,29,31,32,33,34,35,36,37,38,39,40,41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takriti et al. (U.S. PAT. 5974403A), Takriti (U.S. PAT. 6021402 A) and Burns et al. (U.S. PAT. 5189606 A).

Art Unit: 3628

Re claims 1, 6, 26 and 40: Takriti et al. disclose a target pricing system for obtaining an optimum value, the target pricing system resident on one or more host processors in connection with one or more data stores, the target pricing system comprising:

a product model that prices defines list values the bid using stored price data and costs the values using stored cost data(Figs. 2, 3A,3B, col. 2, lines 59-67, col. 5, lines 1-30);

a competitor net price model that calculates an equivalent competitor net price for the value(col. 5, lines 30-45); and

an optimization model that determines the competitive response to any potential bid and computes a target price that maximizes expected contribution(Figs. 2, 3A,3B, col. 2, lines 59-67, col. 5, lines 1-30, col. 6, lines 29-55, i.e. expected contribution is the profit margin).

Takriti et al. does not explicitly disclose a market response model that calculates the probability of winning with the value as a function of price or various models grouped together in one system.

However, Takriti (col. 8, lines 30-45, col. 13, lines 20-30) discloses the probability of a specific value that is a function of price. Further, as shown by Burns et al. (entire document) it is old and well known in the art to assemble various cost or price or cost/benefit models in one predictive comparative system. Thus, it would have been within the level of ordinary skill in the art to modify the method of Takriti et al. by adopting the teachings of Takriti and Burns et al. to obtain an optimal predicted price.

Re claims 2 and 41: Takriti et al. disclose further including an optimization model that computes the target price of an optimal value that maximizes expected contribution(Figs. 2, 3A,3B, col. 2, lines 59-67, col. 5, lines 1-30, col. 6, lines 29-55, i.e. expected contribution is the profit margin).

Re claims 10 and 31: Takriti et al. disclose(s) wherein the market response model includes coefficients for market response predictors based upon historical data(col. 4, lines 40-55).

Takriti et al. does not explicitly disclose for a specific bid, evaluating price and price-independent predictors to generate a market response curve from which an estimated probability of winning a bid is calculated.

However, in Figs. 2, 3, 14, col. 7, lines 20-25, col. 8, lines 30-40, col. 13, lines 20-30 thereof, Takriti disclose(s) projected power-trading transactions in the market and the probability of these transactions occurring. Further, as shown by Takriti (col. 11, lines 55-col. 12, lines 10), cost curves based on power usage that may influence market responses are old and well-known in the art and thus, it would have been obvious to one with an ordinary level of skill in the art to incorporate a market response predictors based on price and non-price factors to ensure full information upon which to predict future market prices.



Re claim 11: Takriti et al. disclose wherein the coefficients are updated over time based on results of past bids(col. 11, lines 30-35). Although Takriti et al. does not explicitly disclose dynamic update, this is old and well known in the computer systems art. Thus, it would be obvious to include dynamic update of coefficients in the target pricing system.

Re claims 12,13, 32, and 33: Takriti et al. disclose wherein the market response predictors are attributes selected from the group comprised of customers, orders, and products. And wherein the customers attributes are static and variable attributes(col. 4, lines 40-col. 5, line 30, i.e. "capacity over the weekends is lower than regular days").

Re claims 15 and 35: Takriti et al. disclose wherein the pre-existing pricing approach is selected from the group comprised of: discounting a list price in the product model(col. 2, lines 5-10); adding to the cost in the product model(col. 5, lines 25-35, col. 6, lines 50-60); and competitive matching of historical data.

Re claims 16, 17, 18 and 37: Takriti et al. disclose further including strategic objectives, each of which affect the target price of the bid(Abstract, col. 2, lines 60-67,col. 4, lines 55-60,col. 7, line 55-col. 8, lines 15). And wherein the strategic objectives are selected

Art Unit: 3628

from the group comprised of: a pre-specified maximum or minimum margin on the bid; and obtaining a pre-specified maximum or minimum success rate on the bid(col. 2, lines 60-67,col. 3, table 1, col. 4, lines 55-60, col. 5, lines 25-30, col. 7, lines 55-col. 8, lines 15). And wherein the strategic objectives are specified at the product segment level and market segment level(col. 2, lines 60-67,col. 3, table 1, col. 4, lines 55-60, col. 5, lines 25-30, col. 7, lines 55-col. 8, lines 15,col. 9, lines 20-30).

Re claims 19, 20,21,38 and 39: Takriti et al. disclose wherein the target pricing system further calculates a target range for the target price using the constraints of the strategic objective objects and determines the target price for the bid that is within the target range(col. 7, line 55-col. 8, lines 15, col. 11, lines 45-67). And wherein the target range is calculated based upon a predetermined plus or minus range around from the maximum expected contribution(col. 7, line 55-col. 8, lines 15, col. 11, lines 45-67).

And wherein the target range is calculated based upon a predetermined plus or minus range around greater and lesser than the calculated optimum target price(col. 9, lines 5-20,col. 11, lines 55-67, col. 11, lines 45-67).

Re claims 22, 23 and 24: Takriti et al. disclose wherein the target pricing system is resident on one or more processors in a local network of a user of the target pricing system(col. 6, lines 40-45, i.e. hard drive is the local machine and World Wide Web is the network). And wherein the system includes a target pricing data store including at

Art Unit: 3628

least the price data, cost data, and historical data, and additional business metrics such as margin, volumes, and revenues(col. 4, lines 55-60, col. 7, line 55-col. 8, line 15, claims 1-7). And wherein the one or more processors of the target pricing system are remotely located from the user of the target pricing system and accessible from a remote interface across the Internet(col. 6, lines 40-45,col. 8, lines 45-55, i.e. hard drive is the local machine and World Wide Web is the network).

Re claims 29: Takriti et al. disclose wherein the step of calculating an equivalent competitor net price further includes the steps of:

retrieving a price from the product model for a specific value; and

applying a discounting model to the price to determine a competitor net price for the specific value(col. 2, lines 5-10, col. 5, line 30-67, i.e. "model permits use of more than one price function").

Re claim 36: Takriti et al. disclose the steps of:

calculating a specific target price for a performance of a contract(Abstract, col. 2, lines 5-10);

determining the applicability of one or more strategic objectives to the target price(col. 4, lines 55-60, col. 5, lines 25-30, col. 7, lines 55-col. 8, line 15);

Art Unit: 3628

calculating a target range for the target bid price that is constrained by the one or more strategic objectives(col. 11, line 45-col. 12, line 10); and

obtaining a target price that is within the target range(col. 10, lines 25-35).

Re claims 3, 7, 14,27,34, and 42: Takriti et al. do not explicitly disclose a benefits model that calculates one or more benefits of target pricing in comparison to a pre-existing pricing approach;

wherein the benefits model obtains the target price for the specific bid, calculates a bid price using a pre-existing pricing approach, and

compares the bid from the pre-existing pricing approach to the market response curve to determine the probability of a successful bid with the pre-existing pricing approach;

compares the expected contribution that would be obtained given the market response at the target price minus the expected contribution that would be obtained given the market response using the pre-existing pricing approach.

However, cost/benefit analysis of newly installed pricing strategies vs. the previous pricing strategy is old and well known in the financial arts. Thus, it would have been obvious to one with an ordinary level of skill in the art to employ cost/benefit analysis to

get the benefit of determining the cost and profitability of the new pricing strategy to ensure it is enhancing profitability.

10. Claims 4,5,8,9,28,30, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takriti et al., Takriti and Burns et al. as applied to claims 1,2,6,7, 27,29 and 42 above, and further in view of Campbell (U.S. PAT. 5918209 A).

Re claims 4, 8, and 43: None of Takriti et al., Takriti and Burns et al. explicitly discloses wherein the product model, competitor price model, market response model, optimization model, and benefits model are objects implemented in software on the one or more processors of the target pricing system.

However, in col. 21, lines 20 thereof, Campbell et al. disclose(s) client-specific objects to industry-specific and generic objects that perform financial calculations. Thus, it would have been obvious to one with an ordinary level of skill in the art to use objects from object-oriented programming to ensure consistent program code design in the target pricing system.

Re claims 5, 9, 28 and 44: Takriti et al. disclose wherein the product model and the competitor price model are n-dimensional with stored data reflective of at least price and cost(Figs. 2,3A,3B, col. 4, lines 50-60,col. 5, lines 25-45 and lines 55-60, i.e. "model permits the use of more than one price function"), and wherein the system pricing the

Art Unit: 3628

value, costing the value, and calculating an equivalent competitor net price are performed(col. 5, lines 30-45). None of Takriti et al., Takriti and Burns et al. explicitly discloses iterative linear interpolation. However, in col. 16, lines 54-62, thereof Campbell et al. disclose linear interpolation which is old and well known in the mathematical arts. Thus, it would have been within the level of ordinary skill in the art to modify the method of Takriti et al., Takriti and Burns et al. by adopting the teaching of Campbell et al. to obtain a value not explicitly expressed, but can be inferred.

Re claim 30: None of Takriti et al., Takriti and Burns et al. explicitly discloses the step of overriding the calculated equivalent competitor net price if the calculated competitor net price falls outside a predetermined range. However, in claims 9 and 35, thereof Campbell et al. disclose overriding a calculated value if the computerized calculation does not fall within a certain expected parameter range. Thus, it would have been within the level of ordinary skill in the art to modify the method of Takriti et al., Takriti and Burns et al. by adopting the teaching of Campbell et al. to override a computer-generated value when the value does not fall within set parameters.

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takriti et al., Takriti, Burns et al. and Campbell et al. as applied to claim 8 above, and further in view of Huang et al. (5953707).

None of Takriti et al., Takriti, Burns et al. and Campbell et al. explicitly discloses the product model, competitor price model, market response model, optimization model, benefits model, and target pricing data store are resident on the one or more processors of the target pricing system located remotely from the user. However, in the Abstract thereof, Huang et al. disclose a client-server system in which the objects (decision support system) are located on the server remotely from the client machine. Thus, it would have been obvious to one with an ordinary level of skill in the art to modify the method of Takriti et al., Takriti and Burns et al. by adopting the teachings of Huang et al. to obtain a distributed computer system whereby the user can access the various models remotely.

***Allowable Subject Matter***

12. Claims 45-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra F. Charles whose telephone number is (703) 305-4718. The examiner can normally be reached on 9-5 Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on (703) 308-0505. The fax phone


Art Unit: 3628

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra F. Charles  
Examiner  
Art Unit 3628

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SUPERVISORY PATENT EXAMINER  
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